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Inhibitors of DNA polymerase III as novel antimicrobial agents against  
gram-positive eubacteria.

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# WEST Search History

DATE: Monday, January 06, 2003

Set Name Query  
side by side

Hit Count Set Name  
result set

*DB=USPT; PLUR=YES; OP=AND*

|    |   |    |    |
|----|---|----|----|
| L1 | polymerase near3 inhibition near3 assay       | 6  | L1 |
| L2 | drug near5 polymerase near3 inhibition        | 3  | L2 |
|    | drug-dna near10 (inhibition or interaction or |    |    |
| L3 | binding or antiviral or antibacterial or      | 43 | L3 |
|    | antibiotic)                                   |    |    |
| L4 | L3 same polymerase                            | 0  | L4 |
| L5 | pia and polymerase                            | 90 | L5 |
| L6 | pia same polymerase                           | 10 | L6 |
| L7 | L5 not l6 and aureus                          | 1  | L7 |

END OF SEARCH HISTORY

## WEST

## Search Results - Record(s) 1 through 6 of 6 returned.

1. Document ID: US 6183967 B1

L1: Entry 1 of 6

File: USPT

Feb 6, 2001

DOCUMENT-IDENTIFIER: US 6183967 B1

TITLE: Nucleic acid ligand inhibitors to DNA polymerases

Detailed Description Text (36):Polymerase Inhibition AssaysDetailed Description Text (37):

Example 2 (FIGS. 7-10) describes a number of polymerase inhibition assays, which demonstrate that the ligands of the invention identified using low temperature affinity selection are capable of inhibiting the interaction of both the Taq and Tth polymerases, at temperatures less than 40.degree. C. Example 2 (FIGS. 11-15) also describes a number of polymerase inhibition assays, which demonstrate that the ligands of the invention identified using high temperature affinity selection are capable of inhibiting the interaction of both Taq and TZ05 polymerase at temperatures of approximately 55.degree. C. In Example 2, the designed hairpin DNA (DNA-HP; 5'-ATGCCTAAGTTCGAACGCGGCTAGCCAGCTTTGCTGGCTAGCC GCGT-3' (SEQ ID NO:6; FIG. 6) is used as a template for measurement of the ability of the enriched pools of DNA, as well as, specific ligands identified according to the method of this invention to inhibit polymerase activity, under a variety of conditions. This assay detects template-directed fill-in synthesis of 15 nucleotides on a fold-back DNA hairpin.

Detailed Description Text (141):Polymerase Inhibition AssaysDetailed Description Text (142):

The polymerase inhibition assays were performed using the template DNA (DNA-HP; 5'-ATGCCTAAGTTCGAACGCGGCTAGCCAGCTTTGCTGGCTAGCC GCGT-3' (SEQ ID NO:6)), end-labeled at the 5' end with T4 polynucleotide kinase and .sup.32 P-.gamma.-ATP and purified by gel electrophoresis under denaturing conditions (FIG. 6). In a representative experimental procedure, either 0.25 pmoles of Taq polymerase (5 U) or 0.125 pmoles (2.5U) of Tth polymerase was mixed with 5 pmoles (250 nM) of the enriched pool, random pool or a specific DNA ligand in the standard PCR buffer (20 .mu.L). Five pmoles (250 nM) of labeled template DNA-HP was added and the mixture was incubated at different temperatures for a given period of time. The reaction was stopped by adding EDTA to a final concentration of 125 mM (5 .mu.L of 0.5 M EDTA). The DNA was resolved on a polyacrylamide gel under denaturing conditions. Gels were visualized by autoradiography and the percent DNA bound was quantitated by phosphoimager. Variations in this general

procedure for specific reactions are noted in the Specification.

Detailed Description Text (157):

Polymerase Inhibition Assays

|       |       |          |       |        |                |      |           |           |             |        |      |             |
|-------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|-------------|
| Full  | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KMJC | Draw. Desc. |
| Image |       |          |       |        |                |      |           |           |             |        |      |             |

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2. Document ID: US 6020130 A

L1: Entry 2 of 6

File: USPT

Feb 1, 2000

DOCUMENT-IDENTIFIER: US 6020130 A

TITLE: Nucleic acid ligands that bind to and inhibit DNA polymerases

Detailed Description Text (33):

Example 2 (FIGS. 5-9) describes a number of Polymerase inhibition assays and demonstrates that the ligands of the invention are capable of inhibiting the interaction of both the Taq and Tth polymerases, at temperatures less than 40.degree. C. In Example 2, the designed hairpin DNA (DNA-HP; 5'-ATGCCTAAGTTCGAACGCGGCTAGCCAGCTTT GCTGGCTAGCCGCGT-3' (SEQ ID NO:6) is used as a template for measurement of the ability of the enriched pools of DNA, as well as, ligands TQ30 (SEQ ID NO:50) and TQ21 (SEQ ID NO:59) from the Taq polymerase selection, to inhibit polymerase activity, under a variety of conditions. This assay detects template-directed fill-in synthesis of 15 nucleotides on a fold-back DNA hairpin.

Detailed Description Text (88):

Polymerase Inhibition Assays

Detailed Description Text (89):

The Polymerase inhibition assays were performed using the template DNA (DNA-HP; 5'-ATGCCTAAGTTCGAACGCGGCTAG CCAGCTTTGCTGGCTAGCCGCGT-3' (SEQ ID NO:6)), end-labeled at the 5' end with T4 polynucleotide kinase and .sup.32 P-.gamma.-ATP and purified by gel electrophoresis under denaturing conditions (FIG. 4). In a representative experimental procedure, either 0.25 pmoles of Taq polymerase (5 U) or 0.125 pmoles (2.5 U) of Tth polymerase was mixed with 5 pmoles (250 nM) of the enriched pool, random pool or a specific DNA ligand in the standard PCR buffer (20 .mu.L). Five pmoles (250 nM) of labeled template DNA-HP was added and the mixture was incubated at different temperatures for a given period of time. The reaction was stopped by adding EDTA to a final concentration of 125 mM (5 .mu.L of 0.5 M EDTA). The DNA was resolved on a polyacrylamide gel under denaturing conditions. Gels were visualized by autoradiography and the percent DNA bound was quantitated by phosphoimager. Variations in this general procedure for specific reactions are noted in the Specification.

Detailed Description Text (104):

Polymerase Inhibition Assays

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3. Document ID: US 5874557 A

L1: Entry 3 of 6

File: USPT

Feb 23, 1999

DOCUMENT-IDENTIFIER: US 5874557 A

TITLE: Nucleic acid ligand inhibitors to DNA polymerases

Detailed Description Text (18):

Example 1 describes the experimental procedures used in the selection of nucleic acid ligands to both the Taq and Tth polymerases. Example 2 describes the polymerase inhibition assay and demonstrates that the ligands of the invention are capable of inhibiting the interaction of both the Taq and Tth polymerases.

Detailed Description Text (37):

POLYMERASE INHIBITION ASSAY.

Detailed Description Text (38):

The polymerase inhibition assays were performed using the template DNA (DNA-HP; 5'-ATGCCTAAGTTCGAACGCGGCTAGCCAGCTTTGGCTAGCCGCGT-3' (SEQ ID NO:6)), end-labeled at the 5' end with T4 polynucleotide kinase and  $\sup{32}$ P- $\gamma$ -ATP and purified by gel electrophoresis under denaturing conditions (FIG. 3). In a representative experimental procedure, 0.25 pmoles of Taq polymerase (5 U) was mixed with 5 pmoles of the enriched pool (or the random pool) in the standard PCR buffer. 3 pmoles of labeled template DNA was added and the mixture was incubated at different temperatures for a given period of time. The reaction was stopped by adding EDTA to a final concentration of 125 mM (5  $\mu$ L of 0.5M EDTA). The DNA was resolved on a 15% polyacrylamide gel under denaturing conditions. FIGS. 4A-4E illustrate the results of the polymerase activity assays.

|                       |                       |                          |                       |                        |                                |                      |                           |                           |                             |                        |                      |                            |
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| <a href="#">Image</a> |                       |                          |                       |                        |                                |                      |                           |                           |                             |                        |                      |                            |

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4. Document ID: US 5763173 A

L1: Entry 4 of 6

File: USPT

Jun 9, 1998

DOCUMENT-IDENTIFIER: US 5763173 A

TITLE: Nucleic acid ligand inhibitors to DNA polymerases

Detailed Description Text (18):

Example 1 describes the experimental procedures used in the selection of nucleic acid ligands to both the Taq and Tth polymerases. Example 2 describes the polymerase inhibition assay and demonstrates that the ligands of the invention are capable of inhibiting the interaction of both the Taq and Tth polymerases.

Detailed Description Text (37):

POLYMERASE INHIBITION ASSAY

Detailed Description Text (38):

The polymerase inhibition assays were performed using the template DNA (DNA-HP:

5'-ATGCCTAAGTTCGAACGCGGCTAGCCAGCTTTGCTGGCTAGCCGCGT-3' (SEQ ID NO:6)), end-labeled at the 5' end with T4 polynucleotide kinase and  $\sup{32}$ P-gamma-ATP and purified by gel electrophoresis under denaturing conditions (FIG. 3). In a representative experimental procedure, 0.25 pmoles of Taq polymerase (5 U) was mixed with 5 pmoles of the enriched pool (or the random pool) in the standard PCR buffer. 3 pmoles of labeled template DNA was added and the mixture was incubated at different temperatures for a given period of time. The reaction was stopped by adding EDTA to a final concentration of 125 mM (5  $\mu$ L of 0.5M EDTA). The DNA was resolved on a 15% polyacrylamide gel under denaturing conditions. FIGS. 4-6 illustrate the results of the polymerase activity assays.

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5. Document ID: US 5693502 A

L1: Entry 5 of 6

File: USPT

Dec 2, 1997

DOCUMENT-IDENTIFIER: US 5693502 A

TITLE: Nucleic acid ligand inhibitors to DNA polymerases

Detailed Description Text (18):

Example 1 describes the experimental procedures used in the selection of nucleic acid ligands to both the Taq and Tth polymerases. Example 2 describes the polymerase inhibition assay and demonstrates that the ligands of the invention are capable of inhibiting the interaction of both the Taq and Tth polymerases.

Detailed Description Text (37):

POLYMERASE INHIBITION ASSAY

Detailed Description Text (38):

The polymerase inhibition assays were performed using the template DNA (DNA-HP:

5'-ATGCCTAAGTTCGAACGCGGCTAGCCAGCTTTGCTGGCTAGCCGCGT-3' (SEQ ID NO:6)), end-labeled at